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## INFLECTIONAL CONTRASTS IN GERMANIC

1. ANALOGY AND CONTRAST.—According to a current phrase of convenience and convention, the two dynamic factors in linguistic development are phonetic laws and analogy. The sphere of phonetic laws has been narrowed somewhat since 1876, when Leskien first established their scientific character, but within reasonable limits they have retained their fundamental importance; the application of the factor of analogy has widened, but little has been accomplished in determining its scope and investigating its psychological basis.

The present paper attempts to take a step in this direction, but at the same time it deviates from the conception of analogy in its technical meaning. In the linguistic sense, analogy may be defined as a process of an associative modification of grammatical forms *in conformity* with other forms of the same or a similar category; according to the Aristotelian distinction, analogy is based on association by similarity. But association by contrast has also given rise to many morphological changes insofar as forms have been modified *in non-conformity* with other forms, from which they were to be differentiated. If remodeled forms of the first type are termed analogical, the name 'contrast forms' may be applied to those of the second type—to forms of negative association or differentiation.

2. SUBJECTIVE AND OBJECTIVE ELEMENTS OF INFLECTION.—The average complete sentence contains both subjective and objective factors. Among the former are time, possession, and attitude towards a fact or an object; among the latter, the descriptive elements of manner and quality in the widest sense of the word, including ways of action, quantity, and degree.

The subjective factors are more prevalent in the verb, the objective factors in the noun. Tense, person, and to an extent also *modus* and *genus verbi*, are subjective categories of the verb; number, gender, degree of comparison, and some case forms are objective categories of the noun. In the older forms of Indo-European languages in general and in the later

Germanic dialects in particular, these constitute the main body of the morphological substance, insofar as the inflection of the verb pertains mainly to tense, mood and person, the inflection of the noun to number and comparison with a secondary emphasis on gender and case. A reference to relatively subjective languages, such as Arabic or Magyar, as well as the more objective ones, e. g., the Slavic and Romance languages, will lend relief to this apparently obvious statement. In the former, certain subjective factors of personal interest (for instance, possession) are inflectionally expressed even with the noun, and the system of verbal moods is, at least in Semitic, much more varied than in Indo-European languages; in the latter, the manner of action has been highly developed, in Slavic even to the point of superseding the system of tenses. This preponderance of subjective factors in certain Semitic and Finno-Ugrian inflections, by the way, does not imply a lesser degree of subjectivity for the Germanic dialects; on the contrary, the elements of possession and personal attitude, far from remaining unexpressed, are so strongly marked in those languages, that they either remained analytic (in the form of possessive pronouns) instead of becoming synthetic (like the possessive suffixes of Arabic and Magyar), or replaced synthetic forms by analytic phrases (modal auxiliaries, personal pronouns instead of personal endings, compound verb forms). But as far as the morphological structure in the narrower sense, the actual inflection, is concerned, the statement is justified that in Germanic, and to an extent in Indo-European in general, *conjugation* expresses the *subjective*, *declension* the *objective* side of the language.

3. THE SUBJECTIVE TENDENCY OF GERMANIC.—Contrast association as expressed in speech may arise from objective as well as from subjective elements: The speaker may contrast either such physical factors as number, color, and shape, or diversities of personal attitude, such as mine and not-mine, now and not-now, here and there. Nevertheless, even objective contrasts are more likely to find formal expression in subjectively (homo-centrally) inclined languages; for instance, the increasingly wide divergence between NHG. singular and plural forms indicates a more intensive, concrete consciousness of the relation of the speaker to object or objects referred to (a mental

counting, as it were) than the partial or complete disappearance of inflectional differentiation between numbers in modern French.

These two statements might have been ventured *a priori*, altho in point of fact I arrived at them inductively: First, contrast association must be expected to play a considerable part in the morphology of a predominantly subjective language, such as Indo-European in general, Germanic especially, and New High German most of all; second, contrast association is peculiarly adapted to become a factor in the subjective elements of conjugation, but in highly subjective languages it may also invade the comparatively objective categories of noun, gender, number, and case.

To prove these tentative statements in full would require a comprehensive analysis of the morphology of various groups on a comparative basis. The present sketch, far from being comprehensive, merely attempts to set forth a number of illustrations of the actual *formative* effect of contrast association within the limits of the old Germanic dialects. Perhaps some of them are somewhat recklessly chosen rather with a view to their fitness as striking illustrations of the contrast principle than on account of the historical certainty of their genetic interpretations; but that can hardly be avoided in the preliminary development of a method that is supposed to serve as a basis for new explanations instead of merely confirming well-established ones.

With the Germanic *noun*, contrast association has created many new forms, but it has not affected its original inflectional structure; with the *verb*, its effect has been much more far-reaching. While we may not be quite certain of the exact structure of the Indo-European conjugational system, we may doubtlessly assert that it was fundamentally different from the Germanic verb system, and I shall try to show that the latter owed its origin largely to the element of contrast. But as it seems more practical to proceed from a discussion of detailed forms to the presentation of a broad principle than to follow the inverse order, I shall first enumerate a few illustrative noun forms.

# THE NOUN

4. TYPES OF CONTRAST.—Theoretically three directions of contrast association might be established within the declension of nouns. First, the contrast of numbers, an objective contrast which, however, may be of paramount importance in the speaker's mind, overshadowing most other grammatical categories; second, the contrast of gender, an objective contrast in historical times, but in view of Brugmann's theory of the origin of IE. noun genders we may assume that it originated in part at least from the subjective differentiation between the concrete and the typical; third, the contrast of cases, which may be subjective or objective, according to their function.

## I. *The Contrast of Numbers*

5. THE IE. FORMS.—Without going into what Brugmann used to term 'glottogonic speculations' concerning the actual origin of the IE. plural forms, their outward appearance in late Pre-Germanic times, at a period not too far removed from the emergence of a separate Germanic group, may be summed up in this way: (1) The nominative plural of the vocalic classes closely resembles the nominative singular, but it is differentiated from the latter by a fuller form of the suffix: *-ōs, -eīes/īs, -eyes/ūs* versus *-os, -is, -us*. The feminine plural in *-ās* may have been modeled after the masculine *-ōs*, or it may have originated independently from *-ā-es*, like *-ōs* from *-o-es*.

(2) Originally, the *-s* of *-ōs, -ās*, etc. was perhaps identical with the singular *-s*, but soon it came doubtlessly to be felt as a plural characteristic; as such it appears, (a) in the *-es*-suffix of consonantic stems, (b) as a secondary *-s*-addition to the corresponding singular ending in the accusative plural in *-ns* < *-m-s* and the various forms of the dative-instrumental plural in *-mis, -mās*.

(3) The genitive plural represents a contrast to the accusative singular; the functional kinship of the two cases is well preserved in Slavic, but appears in other languages too, especially in adverbial expression of time, extent, and manner. As with the nominative, the contrast is expressed by a fuller form, the lengthened ending *-ōm* versus the *-om* (*-ām, -im, -um, -mō*)

of the singular, or the reduplicated *-ōnōm*. (Reduplication as a plural characteristic occurs also in the Vedic nominative masculine plurals in *-āsas*, which are generally supposed to have a counterpart in OE. *-as*, OS. *-os*, and perhaps other Gc. plurals; cp. 7.)

These types of endings constituted the Pre-Germanic plural as a contrast group against the singular. It is characterized either by fuller forms or by the termination *-s*, which may or may not have been a generalization from the nominative plural, and which goes back, ultimately, to the *-s* of the nominative singular of masculine vowel stems.

6. THE GERMANIC DEVELOPMENT.—This nucleus of contrast formation was bound to disintegrate thru the action of phonetic laws, and thus to lose its characteristic group differentiation from the singular, a process that actually did take place in most languages, notably in Slavic, where the case relations superseded the contrast of numbers. In Germanic, however, the elements of contrast were revived and strengthened in spite of phonetic disintegration. Often, it is true, such contrast formations followed the lines, if not of actual phonetic laws, at least of phonetic inclinations; frequently, however, new forms were created in defiance of normal phonetic evolution, retarding or entirely inhibiting the action of phonetic laws; lastly, forms of regular phonetic derivation were transferred to grammatical groups in which the phonetic postulates did not exist—thru ‘analogy,’ *Systemzwang*, in the usual sense of the term. It is not always possible to draw sharp lines between these three types of the relation between contrast creation and phonetic development of inflectional forms.

7. THE NOMINATIVE PLURAL.—The most widely spread result of the contrast tendency between singular and plural appears probably in the nominative plural masculine in *-s*, which holds wide sway in all Germanic dialects except Old High German: Goth. *dagos*, ON. *dagar*, OE. *dagas*, OS. *dagos*. True, this form is susceptible of various explanations; the standard view, founded by Scherer (Streitberg, U. G. p. 230), which traces the OE., OS. forms to IE. *-ōses*, Ved. *-āsas*, is possible, but rather far-fetched and open to the objection

that it arbitrarily separates these forms from the OHG. and probably also from the Gothic and Old Norse forms.<sup>1</sup> Taking the factor of contrast into account, we arrive at this hypothesis: We assume a very early Gc. contrast group singular \**dozōs*: plural \**dozōs*; in order to preserve the greatest possible contrast of numbers, the regular action of the law of final syllables was retarded in the OE. and OS. plurals, while it took its usual course in the singular forms; the question why this was not the case in OHG. will be taken up below (9, Note 3).

8. THE DATIVE PLURAL.—Contrast of numbers may also have been the cause of the generalization of the instrumental ending in *-m* for the plural of the syncretistic instrumental-dative-ablative-locative case; this consonantic form seems to have been selected for the sake of differentiation from the corresponding case of the singular (Goth. *daga*: *dagam*). It is characteristic that the adjective gave the preference to the *-m*-form, the 'pronominal ending,' for the singular too; as is still apparent in modern German, its usual connection with a noun led to the result that the differentiation of cases was expressed mainly in the adjective, the differentiation of numbers in the noun.

9. NEW HIGH GERMAN.—While in English and Norse contrast plurals have not materially progressed beyond the stage of the old dialects, in German, and most of all in High German, the process of contrast creation has continued down to modern times. Since this has been traced very clearly and, for our purposes, with ample completeness by M. Diez, *Analogical Tendencies in the German Substantive* (University of Texas dissertation, 1917), I need but allude to the extension of the *-en-* and *-er-* endings and the *umlaut*. The spread of the latter, however, is so interesting that a few additional remarks may be granted. It was potentially contained in comparatively few Pre-Germanic forms—the *i*-stems and in part the *u*-stems and root-stems. Phonetically, it seems to have been of Celtic origin (cp. author, *Sounds and History of the German Language*, p. 146 f); but this discovery of a new linguistic device was so well in keeping with the Germanic inclination towards contrast

<sup>1</sup> ON.-ar may, of course, be explained as IE.—*ōses*; Goth. *-ōs* is compatible *either* with OHG. *or* with OE., OS.

forms that the most lavish use was made of it without any regard to phonetic conditions; indeed, an entirely unphonetic *umlaut*, *ö*, was created in violation of all phonetic laws, but in conformity with the use of this new device for the creation of contrast forms.

NOTE 1: Compare *Sounds and History of the German Language*, p. 147: "While un-Germanic in its phonetic character, mutation is perfectly in agreement with the articulating habits of Celtic (Romance), Slavic, Finnish, etc. Therefore, it is reasonable to assume that the palatalization of intervening consonants and thru this the mutation of the accented vowels, started among the Celts in the new homes of the Germanic colonists. However, as soon as such forms as *gast-gesti* had become established, this new vowel exchange seemed equivalent to the old vowel exchange (*Ablaut*) in *gab-geben* and was transferred to an ever increasing number of similar grammatical forms, regardless of whether their stem vowels had ever been followed by *i* or not. This explains the immense extent of 'analogy' in the case of vowel mutation: starting out as an un-Germanic process, it gradually became a thoroly Germanic psychological factor, a new kind of *Ablaut*, as it were.

NOTE 2: According to Diez, p. 15, *Umlaut* is phonetically justified only in about 80 masculines, but this number has been quadrupled, 'by analogy,' in Standard New High German. It is clear that this analogy was an effect of the contrast tendency. In the modern German dialects, the *Umlaut*-plural is, according to Friedrich, *Die Flexion des Hauptwortes in den heutigen deutschen Mundarten* (Giessen dissertation, 1911) "heute die beliebteste, ja vielfach an Zahl stärkste Flexion des Maskulins."

NOTE 3: The early systematization of the *Umlaut* as a plural characteristic may have been a reason why OHG. did not, like the other dialects, retain the *-s* of the nominative plural; the inhibition of the phonetic law was less necessary than in the other dialects because a new plural sign was developing.

The reason why 'there has been absolutely no disposition to expand the field of the *Umlaut*-plural where feminines and neuters are concerned' (Diez, p. 18), lies doubtlessly in the fact that the *n*- and *r*-plurals soon came to be felt as the most legitimate plural forms for these genders, and grammatical expansion moved in their direction. The treatment of this process by Diez is very instructive.

## II. The Contrast of Genders

10. THE GERMANIC *n*-STEMS.—The contrast of genders, like that of numbers, shows its first beginnings in Pre-Germanic and is well-developed in all old Germanic dialects; but its further development in historical times is largely confined to German, even more so than the contrast of numbers.



If Brugmann's theory be accepted, the feminine (as well as the neuter) was originally a mere variety of the masculine, the former being distinguished in part by fuller suffix-forms (-*os*, -*om*: *ās*, -*ām*). This condition is well preserved in many IE. languages, but in Germanic it became a nearly indispensable mark of distinction between the two main genders. The *o*-/ā-classes as well as the *i*-class show numerous symptoms of this differentiation, but the most conspicuous examples appear in the treatment of the *n*-stems. Perhaps a slight beginning of the same tendency, soon to be obliterated in the general leveling, may be recognized in Latin *hominem*—*regiōnem*; but in the Germanic *n*-stems vowel quantity became a conclusive mark of gender; no other explanation is necessary for the Gothic contrast *gumins*, *gumans*: *tuggōns*.

This leads to what I believe to be a safe explanation of the much-discussed OHG. *ūn*-forms. In my opinion, they represent a contamination between *ȳ*-forms and *ōn*-forms; in the masculine, *ȳ* develop phonetically to *un* (*hanun*), but in the feminine, *ȳ* > *un* was lengthened to *ūn*, assisted by competing *ōn*-forms. The existing phonetic inclination towards the change of *o* to *u* before a tautosyllabic nasal may have given additional support.

11. NEW HIGH GERMAN.—For the surprisingly sharp differentiation of genders in the later development of the German dialects, one of the most typical instances of leveling according to contrast groups, I refer to Diez, p. 11 and p. 19 (perhaps also to *Sounds and History of the German Language*, p. 181 f). The old distinction between strong and weak nouns had nothing to do with gender, but became the basis of the modern German differentiation of genders; for the feminine, an 'amalgamation of the strong and weak declensions' (Diez p. 11) took place, and the masculines remaining in the *n*-class are chiefly such that denote types (in the sense of Latin *scriba*, *nauta*: *Knabe*, *Bär*, *Schwabe*)—reminding of the original designation of the 'feminine gender.'—Cp. *SHGL.*, p. 181: "Different genders tend towards different declensional classes; masculines are apt to enter (or remain in) the *o*- and *i*-classes, feminines, the *n*-class, neuters, the *o*- and *s*-classes." (This passage does not mention the significant fact—alluded to on page 186—

that the *n*-masculines that enter the *o*-(*i*-)class are mainly those that do not denote types of living beings.

### III. *The Contrast of Cases*

12. CASE DIFFERENTIATION, which is so highly developed in Slavic, is of comparatively little importance in Germanic. Aside from details of minor significance the one fact might be mentioned that the only case that is still clearly distinguishable in most Germanic dialects, the genitive case, happens to be that grammatical category of the noun which is most apt to express subjective interest, while the dative and accusative cases have mainly syntactical functions. It might be suggested that the unphonetic distinction between voiceless *s* in the genitive and voiced *z* in the nominative of Norse and West-Germanic masculines and neuters may be due to a striving for case contrast.

13. ANIMATE AND INANIMATE.—The contrast between animate and inanimate beings is also of considerable importance in Slavic, but of little consequence in Germanic; cp. *SHGL*. p. 185 f.

### THE VERB

14. THE GERMANIC VERB SYSTEM.—The influence of contrast on the noun declension is limited to the remodeling or transfer of individual forms; at best, it might be claimed that the NHG. differentiation of declensional classes according to genders constitutes the nucleus of a new grammatical principle on the basis of contrast. But the dynamic effect of this linguistic factor on the Germanic verb, the main stay of the subjective element of the sentence, is surprisingly far-reaching. It is not confined to the retardation or inhibition of phonetic laws, or to the leveling of forms according to contrast groups; we witness a general upheaval of the inherited structure of the verb system, a consolidation of forms greatly beyond the most liberal definition of syncretism, and the creation of new grammatical categories solely on the basis of subjective contrasts. The combination of the factor of contrast with the standard interpretation of the Germanic conjugation seems to go far towards clarifying some of the most involved problems of this chapter of grammar.

15. *ACTIO versus TENSE*.—The standard view, pregnantly presented by Streitberg, *U. G.* p. 276 ff, assumes for IE. a preponderance of the differentiation of *actiones verbi* over tenses; that is, in the period before the separation of dialects the objective factor of the *manner* of action seems to have been the basis of the internal structure of the verb, especially of vowel gradation, while the subjective factor of *tense* (the chronological relation of the action to the speaker's stand-point—the question of 'now' or 'then') was expressed mainly by secondary means, such as the augment and the reduplication. Of the five or six tenses that are thus claimed—rightly or wrongly—to have been superimposed over the system of *actiones verbi* (Streitberg, §192), Germanic has preserved, or reconstructed, only two, the present and the form termed preterit. The weak preterit—whatever its origin may have been—doubtlessly attained its tense function in compliance with the strong preterit, and the latter must therefore form the starting point for the consideration of the whole problem.

*The Strong Preterit*

16. *OBJECTIONS TO THE STANDARD VIEW*.—Aside from a few forms, especially the WGc. 2nd singular, the Gc. strong preterit is quite generally considered a direct continuation of the IE. perfect tense—a view that is expressed with the greatest assurance by Streitberg, *U. G.* p. 81: "Der Ursprung des schwundstufigen  $\bar{e}$  ist im schwachen Perfektstamm (Perf. Plur. Akt. usw.) zu suchen. Alle Erklärungsversuche, die ihn nicht zum Ausgangspunkt wählen, müssen a priori aus methodischen Gründen als verfehlt betrachtet werden. Denn es kann kein Zufall sein, dass nur der Plural des Perfekts, nicht der vollstufige Singular (aber auch nicht das schwundstufige Partizip Perf.) den Vokal  $\bar{e}$  kennt."

I am far from disputing the weight of the obvious reasons that support this view, but I cannot refrain from attaching equal importance to certain arguments against it:

First of all, the lack of reduplication in the great majority of forms is a disturbing factor. No satisfactory phonetic explanation has ever been given, in fact, such an explanation seems to be out of the question in view of the circumstance that the reduplicating verbs in Gothic do not differ phoneti-

cally from the non-reduplicating verbs: Why should, for instance, *haihait* preserve its reduplication, but *\*baitbait* be contracted or otherwise changed to *bait*?<sup>2</sup> —To resort to the leveling influence of the *ē*-plurals of the fourth and fifth classes (Streitberg's "schwundstufiges *ē*") is not only phonetically, but also logically objectionable: in deriving *\*nēmum* from *\*nēmamēs*, *\*nenemamēs* we first accept its origin from a reduplicated form like *\*newrtamēs* as a matter of course, and then utilize this unproven hypothesis for its own proof, in order to substantiate the derivation of the unreduplicated *\*wurd-* from a reduplicated *\*newrt-*.

It is equally futile to refer to the type *\*woida*—the preterit-presents—as a model for the loss of the reduplication; true, this type never had any reduplication, but only for the reason that it had never possessed past meaning, but had always remained a strict present type.

NOTE: The form group that we are accustomed to classify as the IE. perfect type proper, namely the type (λέ)λοιπα-*foīda*, was apparently an original noun form (Hirt) and as such denoted merely a condition attained—"den erreichten Zustand." The perfect without reduplication never went beyond this meaning: *foīda* = '(my) knowledge' = 'I know.' The reduplication stresses the action that preceded the attainment of this condition, and is, therefore, a *conditio sine qua non* for the imputation of preterit meaning to a 'perfect' form. In other words: *foīda* has always been a present tense, denoting, just like λοιπός (cp. OE. *lāf* 'remainder') nothing but a condition, an accomplished fact; λέλοιπα, however, denotes the condition brought about by leaving, with special emphasis on the act as such: 'I am gone.'

Considering the extreme contrasting tendency of the Germanic verb, which will be pointed out below, the existence of the unreduplicated preterit-presents might rather be expected to have worked for the preservation of the reduplication, as a significant tense characteristic, than for its abandonment. If, indeed, any analogical fusion of the two classes had taken place, a transformation of groups like *skal*—*skulum* in the direction of *stal*—*\*stælum* would have been more likely than the inverse process. This fact and the remarkably

<sup>2</sup> Some of the reduplicating verbs, like *haitan*, have the same stem vowel in the present and preterit forms, and for these the striving for differentiation (contrast) of tenses might be urged as a sufficient reason for the preservation of the reduplication. But this does not cover the reduplicating verbs with vowel gradation, like *létan*—*laſlōi*.

consistent preservation of the old 2nd singular form of the preterit-presents (*skalt*, etc.) instead of an otherwise probable WGc. analogical formation *\*skuli* or *\*skāl(i)* point in the same direction: The small, tho intrinsically important group of preterit-presents holds such an isolated position within the Germanic verb system that it is entirely too bold to ascribe to their *present* forms such a thoroughgoing influence upon nearly all strong *preterits* as the abandonment of the reduplication would indicate.

Furthermore: The 'schwundstufige  $\bar{e}$ ' of classes IV and V, in spite of the multitude of efforts, still presents a serious problem as long as it is treated as a more or less regular phonetic development of a reduplicated perfect type. A similar difficulty is encountered in any phonetic explanation of the WGc. type *\*hēt* from *\*hehail*.

Finally, we cannot but be surprised at the slight representation of aorist forms in the strong preterit. In other IE. languages the aorist forms seemed peculiarly adapted for preterit function: but the Germanic preterit is said to have preserved only some scattered forms of this important type (cp. Streitberg p. 281). This is all the more surprising in view of the fairly considerable number of aorist *presents*. Is it likely that (at least in Norse and Gothic) the *preterit* should show hardly any traces of a form that is so well fitted to serve as a historical tense?

17. THE LOSS OF REDUPLICATION.—The problem may best be attacked at those points where the standard theory is weakest: the disappearance of the reduplication and the  $\bar{e}$ -plurals.

Concerning the former point, H. Hirt (ZZ. 29, 303 ff. and IF. 17, 298 ff.) made the significant observation that the reduplication disappeared in Latin and Germanic to nearly the same extent. Adding to this the factor of contrast, we arrive at the following conclusion: Among the IE. languages, Latin is second only to Germanic in point of subjectivity. Like Germanic, it has practically replaced the *actiones verbi* by 'tenses'; again like Germanic, it has created a new tense type (misnamed 'perfect') combining the functions of the perfect and the aorist. But unlike Germanic, it has chosen the method of assigning to each verb *either* an aorist *or* a perfect (*dixi*, *lēgi*: *pēpuli*,

*cecidī*) and endowing either form with the double tense function—while Germanic (if I may anticipate my theory) has established for all strong verbs a compound paradigm containing both aorist and perfect forms. It is clear that this reduction of three tenses to two, while weakening or abandoning the differentiation of the manner of action, greatly intensified the contrast of *time*.

18. THE *ē*-PLURALS.—As to the origin of the type *nēmum*, it is hardly necessary to offer new arguments to show that it *may* legitimately be claimed as an aorist type. From the abundant bibliography on the subject it may be sufficient to mention: Gustav Meyer, IF, 5, 180 (“Es steht nichts im Wege, in jenem *o* des [albanischen] Präteritums ebenfalls idg. *ē* zu sehen und diese albanische Perfektbildung mit den bekannten und viel erörterten Perfektbildungen gotisch *sētum*, *mētum*, *qēmum*, lit. *sėdės*, *bėgės*, lat. *sēdi*, *lēgi*, *vēni* gleichzusetzen,”); Brugmann, IF, 3, 302 ff (umbr. *prusikurent* ‘pronuntiauerint’ an *ē*-perfect, cognate with Lat. *inseque*); Reichelt, Btr. 27, 63 ff (concerning the Aryan passive aorist of the type *acāri*, *asādi*, *agāmi*); Collitz, *Das schwache Präteritum*, p. 199 (“Erwägt man nun, dass das *-ē*-im Plural der 4. und 5. Ablautsreihe (*nēmum* und *sētum*) ganz aus dem sonstigen Schema des Ablautes heraustritt, und dass zum Systeme des lateinischen Perfekts der idg. Aorist erhebliche Beiträge geliefert hat, so wird man dahin geführt, den Ursprung des *ē* ausserhalb des eigentlichen Perfektstamms zu suchen. Auf Grund des Lateinischen liegt es am nächsten, an einen alten Aorist zu denken. Das könnte dann aber wohl nur der alte einfache Medialaorist gewesen sein, dessen 3. sg. im RV. *sādi*, mit Augment *ā-sād-i* lautet”).

There seems to be at least as much weight of argument for considering these forms as aorists as there is for defending them as perfect forms; a final decision between the two views on a strictly historical and phonetic basis is not to be expected. Thus the attempt is justified to use either of them tentatively in a pragmatic outline of the Germanic tense system and to give the preference to that interpretation which will be more consistent with an outline that offers acceptable solutions of the problems involved.

19. THE TENSE CONTRAST IN GERMANIC.—Of the numerous possible, but more or less problematic *actiones verbi* that

may be attributed to the IE. verb, three at least seem indisputably certain:

(1) Durative action, characterized by the normal grade of the stem vowel ( $\lambda\epsilon\iota\pi\omega$ ).

(2) Completed action (condition) ( $\lambda\omicron\iota\pi-$ ,  $\phi\omicron\iota\delta$ ). Its most typical *ablaut*-characteristic is *o*—the vowel of comparative relaxation, well in keeping with the meaning of the form (see *SHGL*. p. 106). The regular reduction of this *o* in the plural forms is a natural consequence of their oxytonon accent.

(3) Momentary (perfective, resultative) action. Within the system of vowel gradation, the reduced grade seems to be its primary mode of expression ( $\lambda\iota\pi-$ ); but the actual linguistic material shows that the lengthened grade is a very common device for these 'aorist' forms (see above). I do not see how such an apparent anomaly can be explained phonologically, or, indeed, how this conclusion can be avoided: The *e*- and *o*-grade being preëempted for the durative and complete actions, the perfective or aoristic action was expressed by whatever remaining vowel grade happened to offer the most distinct contrast compatible with convenience of pronunciation. In the diphthongal series, this was the reduced grade; in the consonantic series of light bases the omission of the stem vowel would have yielded inconvenient forms, at least in languages without augment (*\*nem-*: *\*nm-*, *\*sed-*: *\*sd-*, *\*ed-*: *\*d-*); therefore the other alternative, the lengthened grade, was resorted to, so that *\*nem-*: *\*nēm-*, *\*sed-*: *sēd-*, *\*ed-*: *\*ēd-* represent contrast pairs of the same significance as *\*leip-*: *\*līp-*, *\*deuk-*: *\*duk-*, *\*wert-*: *\*wrt-*.

20. THE STEM VOWELS.—If, for the sake of argument, this process be tentatively admitted, the further development in primitive Germanic times may be imagined to have been the following:

The IE. differentiation of verb forms served the objective contrast between *actiones verbi*; the general Germanic shifting in the direction of subjective contrasts led to the creation of a contrast between the time of the speaker and any other time—or rather, a *potiori*, the past time. The great majority of simple *ablaut*-verbs express duration,<sup>3</sup> and therefore

<sup>3</sup> For instance, in Old Slavic, out of the whole number of simple, non-derived verbs only about eight are perfective, all others are durative.

the regular IE. employment of the *e*-grade for durative, presentic action did not require any modification. The main types of non-durative action, comprising what in other IE. languages are known as aorist and perfect forms, were merged into a compound paradigm whose sole functional characteristic was the non-presentic, i.e., past meaning: the Germanic Preterit. The selection of either aorist or perfect forms seems to have been directed by a compromise between contrast tendencies and phonetic utility. First of all, the preterit form had to be sufficiently distinct from the corresponding present form; secondly, between two forms that were suitable from that point of view, the preference was generally given to the form that was phonetically better fit—a very elastic criterion, to be sure, but fairly definite in its practical application after all.

21. THE ENDINGS, too, were a compromise. Their most probable derivations are these:

The 1st and 3rd singular in all dialects, and the 2nd singular in Gothic and Norse are unquestionably perfect endings.

The West-Germanic 2nd singular, according to Fierlinger's hypothesis (KZ. 27, 430 ff) has the ending of a thematic aorist; the acceptance of this view depends, of course, on one's attitude towards Sievers's statement (Btr. V 104 ff) that Gc. *-iz* after a short radical syllable is retained as *-i* in WGc. If this ending be interpreted as a transfer from the optative, the general basis of my theory is not materially affected.

The plural endings are highly problematic. For the first person I share the general view that it goes back to the IE. perfect ending *-més* = Sc. *-imá*; the 3rd person in *-un*, doubtless = IE. *-nt*, is an abnormal form for an IE. perfect and should rather, with Chadwick, IF. 11, 189, be classed as an aorist ending. The 2nd person in *-uþ* is clearly analogical, the vowel having been introduced from the 1st and 3rd persons; it is also admissible to assume such an analogical transfer from the 3rd to the 1st person (cp. Dieter p. 383), in which case this form, too, should be assigned to the thematic aorist (*-um* for *-am*).

It is clear that the WGc. *-i* of the 2nd singular, if an aorist ending, is phonetically justified only in the first three classes, from which it was transferred to the long vowel forms *\*nām[i]*,



\**sāt[i]*, \**fōr[i]*, \**hēl[i]*; on the other hand, the *-ūt* of the 3rd plural belonged originally only to the aorists with lengthened grade (Chadwick, l. c.: Goth. *bērun* = \**bhērŋt*) and was analogically substituted for the *-ont* of the thematic aorist forms of the first three classes: \**īzūn* for \**īzān*.

22. PARADIGMS.—Using the OHG. preterit of the 2nd class as an illustration for the first three classes, we arrive at the following paradigms:

IE		OHG	
Aorist	Perfect	Preterit	
<i>dukóm</i>	<i>dedóuka</i>	<i>zōh</i> =	Perfect without reduplication
<i>dukés(i)</i>	<i>dedókūtha</i>	<i>zugī</i> =	Aorist
<i>dukét(i)</i>	<i>dedóuke</i>	<i>zōh</i> =	Perfect without reduplication
<i>dukóme(s)</i>	<i>dedukámés</i>	<i>zugum</i> =	} Perf. without reduplication or Aor., with athematic ending
<i>dukét(e)</i>	<i>deduk-?⁴</i>	<i>zugut</i> =	
<i>dukónt(i)</i>	<i>deduk-?⁴</i>	<i>zugun</i> =	

The OHG. class IV may illustrate classes IV and V:

IE.		OHG.	
Aorist	Perfect	Preterit	
<i>nēmŋ</i>	<i>nenóma</i>	<i>nam</i> =	Perf. without reduplication
<i>nēms</i>	<i>nenómtha</i>	<i>nāmi</i> =	Aor. with analog. ending
<i>nēmt</i>	<i>nenóme</i>	<i>nam</i> =	Perf. without reduplication
<i>nēmme(n)</i>	<i>nenm²més</i>	<i>nāmum</i> =	} Aorist
<i>nēmte</i>	<i>nenm-?⁴</i>	<i>nāmut</i> =	
<i>nēmŋt</i>	<i>nenm-?⁴</i>	<i>nāmun</i> =	

The assumption of such a combined paradigm in which the aorist forms have a slight preponderance over the perfect forms explains in a satisfactory way the loss of the reduplication and the ‘*Schwundstufen-ē*,’ which latter, of course, no longer deserves that term, and overcomes the difficulty of the mysterious disappearance of the aorist forms from preterit function.

⁴ Ending not preserved in Gc. and not certain from other languages.

23. AORIST PRESENTS.—The occurrence of aorist presents does not in the least interfere with this theory. Verbs whose meaning made forms of perfective action more common than those of durative action ('come,' 'step,' 'close,' 'strike') would self-evidently use the aorist form (reduced grade) for the present, as the normal tense. This did not preclude the reappearance of the aoristic element in the combination preterit.—OE. *cuman*, ON. *koma*, OHG. *cuman* offers the interesting phenomenon of the use of both possible aorist stems, *\*qm-* and *\*qēm-*, in different tense functions; the exact parallelism in Sc., Gk., and Lat. points with certainty to a prehistorical functional difference (active *versus* medium?), but its exact scope is obliterated.—The *ū*-forms of the second class (such as Goth. *lūkan*) are best explained on the basis of an arbitrary, i. e., unphonetic, contrast lengthening: *\*lukan* > *lūkan* establishes a contrast with the preterit plural *lukun*. The transformation of the aorist presents of the 1st class is due to the same factor; witness, for instance, the transfer of *\*wigan* to the fifth class in ON. (*vega*), its change to a durative present form in Gothic *weihan* and OHG. *wihan*, and its partial change in the same direction in OHG. *wigan*.—Gc. *\*etan* uses the long-vowel aorist throughout the whole preterit; the reason might possibly be the rather 'bodiless' appearance of the perfect form *\*at*, in comparison with other preterits; however, it is to be considered that we cannot know what the result of the contraction of a vocalic reduplication with *a* would have been in Gc.; perhaps *\*eat* = *\*ēt*?

24. VERNER'S LAW would seem, at first glance, to present a serious objection to this theory. The long-vowel aorists appear to preclude its action. But the difficulty is only an apparent one. In the 4th class, of course, instances of Verner's Law cannot occur. For the 5th class, however, it is not very much of an exaggeration to say: *It is not true* that Verner's Law has been in force in this class! While it occurs with great regularity in the first and second classes, in the fifth class the exceptions are far more numerous than the rule.—Gothic, having leveled the effects of grammatical change, does not offer any material. In Norse, the Germanic voiced and voiceless spirants are not differentiated in the dental and labial series; *vǫ* < *\*waih*: *vogom* may have kept the change from its previous membership in the first class; *siá* and *lesa*

have no grammatical change. In OE. we find the change with *sēon*, *gefēon*, *cweþan*, *wesan*, but not with *lesan*, *genesan*. OS. has it in the case of *quēðan*, *sehan*, *wesan* (but *sāhun* is common in CM), while *lesan* (and perhaps *gīnesan* and *gehan*) have given it up—if they ever had it. In OHG. we find regularly *wārun* and scattered instances of *lārūn*, *quātūn* (but Ludw. 30 *quādhun*, T. regularly *quādun*, O. more frequently *quādun* than *quātūn*; Braune p. 279), but in general the OHG. fifth class is free from grammatical change (*jesan*, *gesan*, *kresan*, *gīnesan*, *gīfehan*, *fnehan*, *gehan*, *giscehan*, *sehan*, *wehan* do not exhibit it at all).

This is a remarkable circumstance. If the grammatical change had been transferred from the first two classes to *all* available verbs of the fifth class, it would hardly seem strange; but we find it with complete regularity only with *wesan*, which, on account of its atonic character, would be more inclined anyway toward voicing a non-final spirant, and with fair frequency in *\*geþan*, which occurs very frequently as an enclitic or a proclitic. The *s*-verbs, aside from *wesan*, are almost entirely exempt; OHG., which is very consistent in the grammatical change of the first and second classes, shows few traces in the fifth class; on the whole, it is much easier to account for the OS. and OE. examples as being modeled after the first two classes, than to explain the all but complete absence of grammatical change in the other two dialects.

25. THE SIXTH AND SEVENTH CLASSES must be treated together. In dealing with the 'light bases' I have retained the usual numbering of the classes for the sake of convenience. From here on it will be necessary to depart from it, because it is my opinion that the so-called sixth and seventh classes constitute the equivalents of classes I-V as represented by heavy bases, with some leveled intrusions of light base verbs, especially in the old sixth class. It is self-evident that as a foundation for this view I accept entirely the Wood-Brugmann theory of the reduplicating verbs, and also, to an extent, Brugmann's explanation of the sixth class.—I submit the following tabulation of classes VI and VII.

(Analogical forms are in brackets; unreduplicated preterit forms, unless analogical, are printed in bold-face italics.)

A: Normal Grade	B: $\bar{o}$ -Grade	C: Reduced Grade
I. IE. $\bar{e}i$	$\bar{o}i$	$\bar{e}i$
OE. <b>hēt</b>	G. <i>hathait</i>	G. <i>haitan</i>
II. IE. $\bar{e}u$	$\bar{o}u$	$\bar{e}u$
OE. <b>hlēop</b>	G. <i>*hathlaup</i>	G. <i>-hlaupan</i>
III. IE. $\bar{e}l$ - ( $\bar{e}n$ -)	$\bar{o}l$ - ( $\bar{o}n$ -)	$\bar{e}l$ - ( $\bar{e}n$ -)
ON. <b>helt</b>	G. <i>hathald</i>	G. <i>haldan</i>
OHG. [ <i>hialti</i> ]		
ON. [ <i>fekk</i> , <i>*fing</i> ]	G. <i>faiſāh</i>	G. <i>fāhan</i>
OHG. <b>fenc</b> , [ <i>fiang</i> ]		
IV-V. IE. $\bar{e}$	$\bar{o}$	$\bar{e}$
(a)	G. <b>ōl</b> , <b>hōf</b>	G. <i>alan</i> , <i>hafjan</i>
(b) G. <i>rēdan</i>	G. <i>rairōþ</i>	OHG. <b>*rat</b> [ <i>riat</i> ]
(c)	G. <i>hōþan</i>	

Phonetically, there can be no objection to this synopsis. The treatment of long diphthongs in Gc. is sufficiently well known to substantiate all of the equations with the possible exception of  $\bar{e}l$ +liquid or nasal and consonant. It is very probable that these groups were shortened to  $el$ +,  $en$ +, in the same way as the other long diphthongs, but in view of the scarcity of material it seems possible that  $e$  from  $\bar{e}$  in the group  $en$ - had remained open at a time when the  $e$  in IE.  $en$ - had already become close or even changed to  $i$ ; thus, forms like *geng*, *feng* may be phonologically correct, or they may have been compromises between phonological *\*ging*, *\*fing* and analogical *gēng*, *fēng*.

The distinction between the fourth and fifth classes is of no consequence with the heavy bases; with the light bases, it is necessary on account of the vowel of the participle, but with the so-called sixth and seventh classes the stem vowels of the present and participle show the same grade.

From the point of view of contrast formation this group of verbs forms a most interesting chapter of grammar—a chapter for the understanding of which the contrast principle seems to be an indispensable key.

The distribution of the tenses over the vowel grades must seem arbitrary, but the inconsistency is an apparent one, brought about by the fusion of several verb types in one group.

The great majority of verbs in these classes are aorist presents, i. e., verbs of primarily perfective meaning. Thus

we find in the old sixth class such meanings as 'strike, go, raise, step, injure, take', in class VII '(take) hold, call, leap, fall, beat, catch, summon' and many others that may have changed from originally perfective to durative meanings. Their present stems require normally the reduced grade and should therefore be found in column C—which is consistently the case with the diphthongal classes and IV-V (a). Subclass IV-V (b) shows presents with the normal grade of heavy bases—and, characteristically, these verbs are preponderantly durative in meaning: 'let, advise (ponder), sleep, know, blow, mow, sow, sweep, twist.' IV-V (c), finally, has verbs of durative-iterative meaning with the *ō*-grade.

The preterit of the seventh class is in Gothic and the well-known scattered forms in Norse and WGc. a regular, reduplicated perfect, while the typical Norse and WGc. preterits show normal *ē*-grade, as far as the extant forms are phonetically admissible; the phonologically abnormal *ē*-forms of the third class (OHG. *hialt*, etc.) are obvious results of leveling, and the same is true of the wide spread of *ēo* in OE.; for Norse and WGc. *ē* in the types ON. *rēþ*, OHG. *riat*, see below.

The seemingly chaotic condition of class VII is aggravated by the suggested combination with class VI, but this is required by the character of these verbs and by the peculiar way in which the principle of contrast has affected both classes.

A comparison with certain Latin verbs is apt to give the clue:

IE.	ə (Reduced Grade)	<i>ā, ē, ō</i> , (Normal Grade)
Latin	<i>vado</i> (perfective)	<i>vādo</i> (durative)
"	<i>labo</i> ( " )	<i>lābor</i> ( " )
"	<i>scabo</i> (present)	<i>scābi</i> (preterit)
"	<i>pango</i> ( " )	<i>pācem</i> (noun)
"	<i>capio</i> ( " )	<i>cēpi</i> (* <i>cāpi</i> ) (preterit)
"	<i>facio</i> ( " )	<i>fēci</i> (preterit)
"	<i>datus</i> (participle)	<i>dōnum</i> (noun)
"	<i>ratus</i> ( " )	<i>rēri</i> (present)
"	<i>lapsus</i> ( " )	<i>lābor</i> ( " )

The parallelism with Germanic is striking: *wadan* is an aorist present, *wōþ*, its phonological contrast, is a preterit; the same is true of *skaban*—*skōf*, *hafjan*—*hōf*; *rēdan* and *slēpan*

are durative presents, and their Norse and WGc. preterits are obvious levelings, substituted doubtlessly for contrast forms with the reduced grade: *\*raþ*, *\*slap*. My explanation is this:

As stated above, the great majority of heavy base verbs are perfective in meaning; therefore, they have aorist presents, with reduced grade. There exists a regular reduplicated perfect, preferably with *ō*-grade, which is preserved in Gothic. In Norse and West-Germanic, however, preterit function was assigned to the normally durative form, with normal grade, merely by force of contrast; the 'usual' form (that is, with perfective verbs, the reduced grade) became the present, while the less usual form indicated that which was not present, or the preterit. *Facio*—*fēci*, *cipio*—*cēpi* (*cāpi*) show the beginning of a similar process in Latin, while Greek *τί-θη-μι*—*ἔ-θη-κα*, *δίδω-μι*—*ἔ-δω-κα* suggests that this distribution of tenses was not an inherited, but a secondary condition.

The few durative verbs with heavy bases, like Goth. *rēdan*, would have offered the possibility of contrast forms like Latin *ratus*, *lapsus* (Goth. *\*raþ*, *\*slap*), but the well-established *ē*-form of the first class (*hēt*) was transferred to these forms in Norse and WGc.—a process akin to the later spread of *eo* in OE., *ia* in OHG.

Why the type *hōf*, *skōf* shows Gc. *ō* instead of *ē* does not require any justification; the normal grades of heavy bases with simple vowels do not possess the same elasticity of qualitative gradation as do the light bases; for instance, *\*st(h)ā-*, *\*θē-*, *\*dō-* alternate only with *\*st(h)ə-*, *\*θə-*, *\*də-*, but not with, say, *\*st(h)ē-*, *\*θō-*, *\*dā-*. Occasional forms of gradation, like *ῥήγνυμι*—*ἔρρωγα*, Goth. *lētan*—*laīlōt* are probably secondary formations.

Old class VI and our sub-class IV-V (c) still require some comment. Most verbs of class six are clear aorist presents of heavy bases, e. g., Goth. *skaban*, *alan*, *anan*, *hafjan*. But there are a few light bases, like *faran*, *frapjan*. For the latter, I accept Brugmann's view, that we have to deal with causative (or, in part, iterative) formations, but I believe that their preterits would regularly have been *\*fērum*, etc., for the plural, and probably *\*far* or *\*fēr* for the singular—forms that were replaced by the *ō*-forms, presumably on account of the resemblance with the infinitive forms of the types *far(j)an* and *hafjan*.

A few iteratives of heavy bases were formed like *far(j)an*, namely, the type of Goth. *hwōpan*, *flōkan*, *wōþjan*, *blōtan*, *flōkan*, OE. *blōtan*, *blōwan*, *grōwan*, *rōwan*, *spōwan*, etc. In Norse and WGc. they formed analogical preterits like OE. *blēot*, ON. *blét*, OHG. (\**pleoz*) *plōzta*.

I believe that my hypothesis covers all problems of these two classes—unless the question be raised why the old perfect of the seventh class was preserved so much more clearly than that of all other classes, and especially why it was standardized in Gothic. Perhaps there can be no conclusive answer to that question; but the fact should be taken into consideration that forms like *stigan*, *nēmūn* had been aorists since IE. times, while *hēt* assumed that function in the Gc. period, by mere force of contrast, and therefore entered later into competition with the perfect than the aorists of the light bases. As to the monopoly of the reduplicated forms in Gothic, it might be assumed that the prominence of Gc.  $\bar{e} < \bar{e}i$  in the simple preterits of this class had something to do with it; since Gothic did not differentiate Gc.  $\bar{e}$  and  $\bar{a}$ , it could not create contrasting analogy forms like OHG. *sliaf*, but retained *saislēp*, and the model of this type may have preserved *haihait* in preference to *hēt*; it is quite likely that unreduplicated preterits of the latter type were current in actual Gothic speech. The gradated type *lailōt* (see above) is a Gothic peculiarity, apparently created in accordance with type *haihwōþ*.

Verner's Law cannot be used either for or against this interpretation of classes VI and VII. It is not worth while to point out in detail that grammatical change occurs only sporadically in these classes—a fact which would, apparently, support my view. There has been a great deal of leveling at all events, and it would be idle to try to find out in which direction this has taken place.

26. THE WEAK VERBS offer an important contribution to the contrast factor insofar as the weak preterit, whatever its origin may have been, certainly did not denote past tense in Pre-Germanic, but rather some *actio verbi* or *genus verbi*; Brugmann's and Collitz's interpretations may be equally correct, insofar as several types of verb forms may have been consolidated into one aorist type, just as the sixth class contains preterits of radically different origin. For the purposes

of this discussion, the essential point is this: *sōkjan* was an establisht durative (iterative) present; any other forms of the same stem were bound to disappear or to assume non-presentic function, that is, if they survived, they became preterits, and for some reason, perhaps on account of their distinctiveness, *ǝ*-derivatives monopolized the field to the exclusion of other formations (of which Slavic, for instance, possesses an abundance).

\* \* \*

27. CONTRAST IN GERMANIC PHONOLOGY. If the element of contrast occupies such a dominant position in Germanic morphology, it would hardly seem too audacious to look for traces in Germanic phonology too. One may easily be led too far by such a search (as for instance, concerning the psychological origin of the Gc. consonant shift), but at least one aspect of the Germanic treatment of sounds seems quite clearly to point to a striving for contrast, namely, the divergent treatment of IE. long and short vowels.

In Slavic there is a marked tendency to subdue the contrasts of quantity by an inverse distribution of the intensity of articulation; long vowels were apt to be relaxed, short vowels, to be narrowed ( $a > o$ ,  $\bar{o} > \bar{a}$ ), and this led gradually to a complete leveling of quantitative differences. In Germanic, on the other hand, long vowels were narrowed and short vowels relaxed ( $o > a$ ,  $\bar{a} > \bar{o}$ ). This resulted in an increase of contrast between the two series which is still apparent in the consistent, tho not unchanged, retention of quantitative differences in modern Germanic languages, most of all in German.

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